

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **05110079 A**(43) Date of publication of application: **30.04.93**

(51) Int. Cl.

H01L 29/784(21) Application number: **03271504**(71) Applicant: **FUJITSU LTD**(22) Date of filing: **18.10.91**(72) Inventor: **SUZUKI KUNIHIRO**(54) **MANUFACTURE OF SEMICONDUCTOR DEVICE**

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(57) Abstract:

PURPOSE: To provide a method of manufacturing an insulated gate type FET, where the insulated gate type FET is prevented from varying in threshold value due to the penetration of boron (B) into a substrate by using a gate oxide film when boron fluoride (BF_2) ions are implanted for the formation of a shallow source-drain junction.

CONSTITUTION: A first process where a thermally oxidized gate oxide film 2 is formed on the surface of an N-type silicon substrate 1 and a polysilicon film 3 is grown thereon, a second process where B ions are implanted into the polysilicon film 3, a third process where an implantation mask 4 is laid on the polysilicon film 3, and the polysilicon film 3 and the implantation mask 4 are patterned and left on a gate forming region, and a fourth process where BF_2 ions are implanted into the substrate 1 using the patterned implantation mask 4 as a mask, and the substrate 1 is thermally treated to form a source/ drain region 1A are provided.

